

## **REMARKS**

### **Summary of the Office Action**

In the Final Office Action dated August 27, 2002, the Examiner indicates that the original rejection as stated in the Non-Final Office Action dated March 11, 2002 is still valid. Claims 1, 2 and 4-14 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over “A New Wide-Viewing-Angle VA-Mode LCD with a Simpler Cell Fabrication Process” to Rho et al. (hereinafter Rho) in view of U.S. Patent No. 6,067,140 to Woo et al (hereinafter Woo).

### **Summary of the Response to the Office Action**

Applicants have amended claims 1, 4 and 8. Claims 1-2 and 4-14 remain pending in this application, and are currently under consideration.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned “**Version with Markings to Show Changes Made.**”

### **The Rejection under 35 U.S.C. §103**

Claims 1, 2 and 4-14 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Rho in view of Woo.

To the extent that the Examiner may consider this rejection to apply to the newly amended claims, the rejection is traversed as being based upon a combination of references that neither teach nor suggest the novel combination of features now recited in amended independent claims 1, 4 and 8, and hence, dependent claims 2, 5-7 and 9 -14.

In the Office Action dated August 27, 2002, the Examiner relies upon Rho for an alleged teaching of a liquid crystal device (LCD). The Office Action notes that in addition to the teachings of Rho as cited in the original Office Action, Woo discloses a liquid crystal display device comprising a first electrode 121 on a first substrate 101 having a plurality of slit patterns 121, a second electrode 122 on a second substrate 102, a liquid crystal 125 between the first and second substrates. The Office Action further alleges that the liquid crystal has different alignment directions by each slit pattern and at least one light shielding layer below each slit pattern.

In addition to the elements noted in the Office Action, Woo also discloses a gate insulating layer 115, a layer 116, a pixel electrode 121, a metal layer 130, and a first alignment layer 117. Woo further discloses a second substrate 102, a color filter layer 123, a counter electrode 122, and a second alignment layer 118.

Claims 1 and 4, as amended recite a liquid crystal display device combination including “a first electrode having a plurality of slit patterns directly on the insulating film.” Neither Woo nor Rho teach or fairly suggest this newly added feature of the amended claims. Woo at most teaches forming a gate insulating layer 115 on a first substrate 101, forming a layer 116 on top of the gate insulating layer 116, and then forming a pixel electrode 121 over layer 116 (column 3, lines 28-38). Rho on the other hand makes no mention to an insulating film nor to an electrode having a plurality of slits formed directly over the insulating film.

Applicants respectfully assert that the rejections of claims 1 and 4 under 35 U.S.C. §103(a) should be withdrawn because neither Woo nor Rho, whether taken singly or combined, teach or suggest each feature of independent claims 1 and 4, as amended. MPEP §2143.03 instructs that “[t]o establish *prima facie* obviousness of a claimed invention, all the claim

limitations must be taught or suggested by the prior art. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974).” Furthermore, Applicants respectfully assert that dependent claims 2 and 5-7 are allowable at least because of their dependence from claim 1.

Claim 8, as amended, recites a method of fabricating a liquid crystal display device including the steps of “forming an insulating layer on the entire surface of the first substrate and on the at least one light-shielding layer,” and “forming a first electrode directly on the insulating layer.”

As explained above, Applicants respectfully submit that neither Rho nor Woo taken either singularly or combined teach or fairly suggest the claimed features of forming an insulating layer on the entire surface of the first substrate and on the at least one light-shielding layer, and forming a first electrode directly on the insulating layer, as recited in newly amended independent claim 8. Accordingly, Applicants respectfully assert that the rejection of claim 8 under 35 U.S.C. §103(a) should be withdrawn because neither Woo nor Rho, whether taken singly or combined, teach or suggest each feature of independent claim 8, as amended. Allowance of claim 8 is therefore respectfully requested. Furthermore, Applicants respectfully assert that dependent claims 9-14 are allowable at least because of their dependence from claim 8.

**CONCLUSION**

In view of the foregoing remarks, Applicants respectfully request the entry of this Amendment to place the application in clear condition for allowance or, in the alternative, in better form for appeal. Applicants also request the Examiner's reconsideration and reexamination of the application and the timely allowance of the pending claims.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite the prosecution.

**EXCEPT** for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

Claims 1, 4 and 8 have been amended as follows:

1. (Twice Amended) A liquid crystal display device comprising:

~~[a first electrode]~~ **an insulating film** on a first substrate ~~[having a plurality of slit patterns];~~

~~[a second electrode on a second substrate;]~~

**a first electrode having a plurality of slit patterns directly contacting the insulating film;**

~~[a liquid crystal layer between the first and second substrates, the liquid crystal layer having different alignment directions by each slit pattern; and]~~

at least one light-shielding layer below each slit pattern;

**a second electrode on a second substrate; and**

**a liquid crystal layer between the first and second substrates, the liquid crystal layer having different alignment directions by each slit pattern.**

4. (Twice Amended) A liquid crystal display device comprising:

**an insulating film on a first substrate;**

a first electrode ~~[on a first substrate]~~ having a plurality of slit patterns **directly contacting the insulating film;**

**at least one light-shielding layer below the first electrode and the slit patterns;**

a second electrode on a second substrate; **and**

a liquid crystal layer between the first and second substrates, the liquid crystal layer having different alignment directions by each slit pattern, [~~;~~ and]  
[~~at least one light-shielding layer below the first electrode and the slit patterns.~~]

8. (Twice Amended) A method of fabricating a liquid crystal display device on first and second substrates, comprising:

forming at least one light-shielding layer on the first substrate;

forming [~~a first electrode on~~] an insulating layer on the entire surface of the first substrate and on the at least one light-shielding layer;

forming a first electrode directly on the insulating layer, the first electrode having a plurality of slit patterns over the light-shielding layer;

forming a second electrode on the second substrate;

assembling the first and second substrates; and

forming a liquid crystal layer having different alignment directions by each slit pattern between the first and second substrates.